IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:	)	
	)	
RODNEY M. LAFOLLETTE, ET AL.	)	Docket: 7310.C
	)	
Serial No.:	)	
	)	Art Unit:
Filed: 14 August 2001	)	
	)	
For: MICROSCOPIC BATTERIES FOR MEMS SYSTEMS	)	Examiner:
	)	
	)	

PRELIMINARY AMENDMENT

Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

Sir:

Please amend the above-identified application as follows:

IN THE SPECIFICATION:

Page 1, line 3 change "contract F20601-96-C-008" to - - contracts F29601-96-C-0078 and F33615-96-C-2674 - -

Page 1, between lines 5 and 6, insert the following continuity statement:

- - Continuity

This application is a continuation of our co-pending U.S. Patent Application Serial No. 09/037,801, filed March 20, 1998, now _____. - -

Page 3, line 9, change "are" to - - is - -.

Page 8, line 14, cancel "storage".

Page 34, line 23, change "storage" to - - providing - -.

Page 38, line 4, change "94" to - - 94'- -.

Page 43, line 6, cancel "bottom".

Page 43, line 9, cancel "bottom".

Page 43, line 17, after "layer" insert - -40'- -.

Page 43, line 21, change "42" to - - 42'- -.

Page 44, line 9, change "42" to - - 42'- -.

Page 44, line 12, change "42", both occurrences, to - - 42'- -.

Page 44, line 16, change "for" to - - to- -.

Page 44, line 6, change "42" to - - 42'- -.

Page 45, line 7, change "42" to - - 42'- -.

Page 47, line 17, change "44" to - - 44'- -.

Page 48, line 5, before the "." insert - - which has polymeric sealant 43' over the film 40″- -; before "Note" insert - - Polyimide spacers 38″ are disposed beneath the first microscopic electrodes 34″- -.

Page 48, line 15, change "44" to - - 44'- -.

Page 48, line 19, change "59" to - - 59'- -.

Page 50, line 6, change "94" to - - 94″- -.

IN THE ABSTRACT OF THE DISCLOSURE

Please cancel the original Abstract of Disclosure and substitute the following:

Abstract of Disclosure

- - Microscopic batteries, integratable or integrated with microelectromechanical systems or other microscopic circuits, including a MEMS microcircuit, and methods of microfabrication of such microscopic batteries are disclosed, among which comprise closed system microscopic batteries for internal storage of electricity using interval reactants only, which comprise microscopic electrodes, electrolyte and reservoir for the electrolyte.- -

IN THE DRAWINGS

Please substitute the enclosed A4 drawings for the original drawings.

IN THE CLAIMS:

Please amend the claims which follow as indicated below:

- - 10. (Amended) A microscopic battery comprising a system for internal storage of electricity comprising reactants, the microscopic battery having a volumetric size which is microscopic including a micrometer footprint substantially less than 20 cm^2 congruent with a microelectronic circuit accommodating integration with the circuit to provide long term stored power and to materially limit power losses, the microscopic battery comprising a body of material having a first microscopic electrode of chemically reactant material, a second microscopic electrode spaced from the first electrode and a microscopic amount of internal ion-transmitting electrolyte which restricts electronic current flow and accommodates reactions at the electrodes contained within an internal microscopic space in the body accessible to both electrodes. - -

A marked up copy of the foregoing is presented below:

- - 10. (Amended) A microscopic battery comprising a system for internal storage of electricity comprising reactants, [which] the microscopic battery having a volumetric size which is microscopic including a micrometer footprint substantially less than 20 cm^2 congruent with a microelectronic circuit accommodating integration with the circuit [is integrated or integratable with a microelectronic circuit and/or a microelectromechanical system] to provide long term stored power and to materially limit power losses, the microscopic battery comprising a body of material having a first microscopic electrode of chemically reactant material, a second microscopic electrode spaced from the first electrode and a microscopic amount of internal ion-transmitting electrolyte which restricts electronic current flow and accommodates reactions at the electrodes contained within an internal microscopic space in the body accessible to both electrodes. - -

- - 11. (Amended) The microscopic battery according to claim 10 wherein the microscopic battery is rechargeable. - -

A marked up copy of the foregoing is presented below:

- - 11. (Amended) [A] <u>The</u> microscopic battery according to claim 10 wherein the microscopic battery is rechargeable. - -

- - 12. (Amended) The microscopic battery according to claim 10 wherein the microscopic battery is primary. - -

A marked up copy of the foregoing is presented below:

- - 12. (Amended) [A] <u>The</u> microscopic battery according to claim 10 wherein the microscopic battery is primary. - -

- - 13. (Amended) The microscopic battery according to claim 10 further comprising an autonomous sensor system integrated with the microscopic battery. - -

A marked up copy of the foregoing is presented below:

- - 13. (Amended) The microscopic battery according to claim 10 <u>further comprising an autonomous sensor system integrated with</u> [wherein] the microscopic battery [is integrated with an autonomous sensor system]. - -

- - 14. (Amended) The microscopic battery according to claim 13 wherein the autonomous sensor system senses conditions, analyzes data, and issues radio frequency signals. - -

A marked up copy of the foregoing is presented below:

- - 14. (Amended) [A] <u>The</u> microscopic battery according to claim 13 wherein the autonomous sensor system senses conditions, analyzes data, and issues [RF] <u>radio frequency</u> signals. - -

- - 15. (Amended) The microscopic battery according to claim 10 wherein at least one of the electrodes comprises a thin film of conductive material. - -

A marked up copy of the foregoing is presented below:

- - 15. (Amended) [A] The microscopic battery according to claim 10 wherein at least one of the [cathode and the anode] electrodes comprises [an ultra] a thin film of conductive material. - -

- - 16. (Amended) The microscopic battery according to claim 10 wherein the electrodes are held apart by a separator comprising the electrolyte. - -

A marked up copy of the foregoing is presented below:

- - 16. (Amended) The microscopic battery according to claim 10 wherein the [cathode and the anode] electrodes are held apart by a separator comprising the electrolyte. - -

--17. (Amended) The microscopic battery according to claim 10 wherein the electrodes are carried on a rigid dielectric substrate. - -

A marked up copy of the foregoing is presented below:

--17. (Amended) The microscopic battery according to claim 10 wherein the electrodes [cells] are carried on a rigid dielectric substrate. - -

--18. (Amended) The microscopic battery according to claim 10 wherein the electrodes are carried on a flexible sheet. - -

A marked up copy of the foregoing is presented below:

- - 18. (Amended) [A] The microscopic battery according to claim 10 wherein the electrodes [cells] are carried on a flexible sheet. - -

--19. (Amended) The microscopic battery according to claim 10 wherein the electrodes are created by metallic deposition, thin layer lithographic patterning and etching. - -

A marked up copy of the foregoing is presented below:

- - 19. (Amended) [A] The microscopic battery according to claim 10 wherein the electrodes are created by metallic deposition, thin layer lithographic patterning and etching. - -

- - 20. (Amended) The microscopic battery according to claim 10 wherein the electrodes comprise an etched profile. - -

A marked up copy of the foregoing is presented below:

- - 20. (Amended) [A] <u>The</u> microscopic battery according to claim 10 wherein the electrodes comprise an etched profile. - -

- -21. (Amended) An energy storage microscopic rechargeable battery having internal only chemical reactants, the battery having a volumetric size comprising a micrometer footprint adapted for direct and congruent size integration with microelectromechanical systems and/or microcircuitry to reduce power losses, the microscopic rechargeable battery comprising internal only etched spaced electrodes of reactant material comprising microscopically sized footprints with an internal only microscopic space containing electrode reaction accommodating electrolyte interposed between the spaced reactant electrodes. - -

A marked up copy of the foregoing is presented below:

- -21. (Amended) An energy storage microscopic rechargeable battery having internal only chemical reactants, the battery having a volumetric size comprising a micrometer footprint adapted for direct and congruent size integration with [MEMS] microelectromechanical systems and/or microcircuitry to reduce power losses, the microscopic rechargeable battery comprising internal only etched spaced electrodes of reactant material comprising microscopically [thin layers] sized footprints with an internal only microscopic space containing electrode reaction accommodating electrolyte interposed between the spaced reactant electrodes. - -

- - 22. (Amended) The microscopic rechargeable battery according to claim 21 wherein a microscopic separator associated with the electrolyte is interposed between the microscopic electrodes. - -

A marked up copy of the foregoing is presented below:

- - 22. (Amended) [A] The microscopic rechargeable battery according to claim 21 wherein a microscopic separator associated with the electrolyte is interposed between the microscopic electrodes. - -

- -23. (Amended) The microscopic rechargeable battery according to claim 21 wherein the thin electrode layers comprise generally flat conductive film. - -

A marked up copy of the foregoing is presented below:

- -23. (Amended) [A] The microscopic rechargeable battery according to claim 21 wherein the thin electrode layers comprise generally flat conductive film. - -

- -24. (Amended) The microscopic rechargeable battery according to claim 21 wherein the microscopic battery is sealed. - -

A marked up copy of the foregoing is presented below:

- -24. (Amended) [A] <u>The</u> microscopic rechargeable battery according to claim 21 wherein the microscopic battery is sealed. - -

- -25. (Amended) The microscopic rechargeable battery according to claim 21 wherein the battery geometry is selected from the group consisting of: (a) flat cell; (b) spirally wound; (c) bipolar; and (d) linear. - -

A marked up copy of the foregoing is presented below:

- -25. (Amended) [A] <u>The</u> microscopic rechargeable battery according to claim 21 wherein the battery geometry is selected from the group consisting of: (a) flat cell; (b) spirally wound; (c) bipolar; and (d) linear. - -

- -26. (Amended) The microscopic rechargeable battery according to claim 21 wherein the battery geometry is selected from the groups consisting of: (a) wire-shaped; (b) odd-shaped; (c) wire in a can; and (d) peg in a block.- -

A marked up copy of the foregoing is presented below:

- -26. (Amended) [A] The microscopic rechargeable battery according to claim 21 wherein the battery geometry is selected from the groups consisting of: (a) wire-shaped; (b) odd-shaped; (c) wire in a can; and (d) peg in a block.- -

- -27. (Twice Amended) The microscopic rechargeable battery according to claim 21 wherein at least one electrode comprises a reactant material selected from the group consisting essentially of materials comprising: (a) lead; (b) zinc; (c) nickel; and (d) derivatives thereof [of (a), (b) and (c)].- -

A marked up copy of the foregoing is presented below:

- -27. (Amended) [A] The microscopic rechargeable battery according to claim 21 wherein at least one electrode comprises a reactant material selected from the group consisting essentially of materials comprising: (a) lead; (b) zinc; (c) nickel; and (d) derivatives thereof [of (a), (b) and (c)].- -

- -28. (Amended) The microscopic rechargeable battery according to claim 21 wherein at least one reactant electrode comprises a material selected from the group consisting essentially of materials comprising: (a) a metal hydride; (b) lithium; (c) silver; and (d) copper, and derivatives thereof.- -

A marked up copy of the foregoing is presented below:

- -28. (Amended) [A] The microscopic rechargeable battery according to claim 21 wherein at least one reactant electrode comprises a material selected from the group consisting essentially of materials comprising: (a) a metal hydride; (b) lithium; (c) silver; and (d) copper, and derivatives thereof.- -

- -29. (Amended) The microscopic rechargeable battery according to claim 21 wherein at least one reactant electrode comprises a material selected from the group consisting essentially of materials comprising: (a) platinum; (b) carbon; (c) cadmium; and (d) lanthanum, and derivatives thereof.- -

A marked up copy of the foregoing is presented below:

- -29. (Amended) [A] The microscopic rechargeable battery according to claim 21 wherein at least one reactant electrode comprises a material selected from the group consisting essentially of materials comprising: (a) platinum; (b) carbon; (c) cadmium; and (d) lanthanum, and derivatives thereof.- -

- -30. (Amended) The microscopic rechargeable battery according to claim 21 wherein the reaction accommodating electrolyte is selected from the group consisting essentially of: (a) liquid; [and] (b) solid; and (c) a hybrid of liquid and solid.- -

A marked up copy of the foregoing is presented below:

- -30. (Amended) [A] The microscopic rechargeable battery according to claim 21 wherein the reaction accommodating electrolyte is selected from the group consisting essentially of: (a) liquid; [and] (b) solid; and (c) a hybrid of liquid and solid.- -

- -31. (Amended) The microscopic rechargeable battery according to claim 30 wherein the solid reaction accommodating electrolyte is selected from the group consisting essentially of: (a) an ion-conducting polymer; (b) lithium glass; and (c) a polymer containing an ionically-conductive material.- -

A marked up copy of the foregoing is presented below:

- -31. (Amended) [A] The microscopic rechargeable battery according to claim 30 wherein the solid reaction accommodating electrolyte is selected from the group consisting essentially of: (a) an ion-conducting polymer; (b) lithium glass; and (c) a polymer containing an ionically-conductive material.- -

- -32. (Amended) The microscopic rechargeable battery according to claim 30 wherein the liquid reaction accommodating electrolyte comprises an aqueous solution also comprised of potassium hydroxide and/or sulfuric acid.- -

A marked up copy of the foregoing is presented below:

- -32. (Amended) [A] <u>The</u> microscopic rechargeable battery according to claim 30 wherein the liquid <u>reaction accommodating</u> electrolyte comprises an aqueous solution also comprised of potassium hydroxide and/or sulfuric acid.- -

--33. (Amended) An internal electrical energy storage microscopic rechargeable battery comprising a volumetric microscopic size including a micrometric-sized footprint for direct size and electronic integration into a microelectromechanical system or non-microelectromechanical system microcircuit to alleviate power losses, the battery comprising at least one electrical energy storage cell comprised of internal reactants only in the nature of separated internal microscopic electrodes each having a footprint substantially less than 20 cm^2 of reactant material etched and patterned in place to define an internal microscopic electrolyte storage space between the etched microscopic electrodes. - -

A marked up copy of the foregoing is presented below:

--33. (Amended) An internal electrical energy storage microscopic rechargeable battery [adapted] comprising a volumetric microscopic size including a micrometric-sized footprint for direct size and electronic integration into a [MEMS] microelectromechanical system or non-[MEMS] microelectromechanical system microcircuit to [significantly] alleviate power losses, the battery comprising at least one electrical energy storage cell comprised of internal reactants only in the nature of separated internal microscopic electrodes each having a footprint substantially less than 20 cm^2 of reactant material etched and patterned in place to define an internal microscopic electrolyte storage space between the etched microscopic electrodes. - -

- -34. (Amended) The microscopic rechargeable battery according to claim 33 wherein at least one reactant electrode comprises a thin film of conductive material.- -

A marked up copy of the foregoing is presented below:

- -34. (Amended) [A] The microscopic rechargeable battery according to claim 33 wherein at least one reactant electrode comprises a thin film of conductive material.- -

- -35. (Amended) The microscopic rechargeable battery according to claim 33 further comprising a non-conductivity base upon which components of the microscopic battery are carried.- -

A marked up copy of the foregoing is presented below:

- -35. (Amended) [A] The microscopic rechargeable battery according to claim 33 further comprising a non-conductivity base upon which components of the microscopic battery are carried.- -

- -36. (Amended) The microscopic rechargeable battery according to claim 35 wherein the base is selected from the group consisting essentially of: (a) conformal material and (b) rigid material.- -

A marked up copy of the foregoing is presented below:

- -36. (Amended) [A] <u>The</u> microscopic rechargeable battery according to claim 35 wherein the base is selected from the group consisting essentially of: (a) conformal material and (b) rigid material.- -

- -37. (Amended) The microscopic rechargeable battery according to claim 33 further comprising a non-reactant electrolyte influent flow path extending through at least one electrode by which liquid electrolyte is introduced into the storage space. - -

A marked up copy of the foregoing is presented below:

- -37. (Amended) [A] <u>The</u> microscopic rechargeable battery according to claim 33 further comprising [an] <u>a non-reactant</u> electrolyte influent flow path extending through at least one electrode by which liquid electrolyte is introduced into the storage space. - -

- -38. (Amended) The microscopic rechargeable battery according to claim 33 wherein the storage space comprises an etched cavity.- -

A marked up copy of the foregoing is presented below:

- -38. (Amended) [A] The microscopic rechargeable battery according to claim 33 wherein the storage space comprises an etched cavity.- -

- -39. (Twice Amended) The microscopic rechargeable battery according to claim 33 wherein a separator associated with electrolyte in the storage space prevents contact between the electrodes.- -

A marked up copy of the foregoing is presented below:

- -39. (Amended) [A] The microscopic rechargeable battery according to claim 33 wherein a separator associated with electrolyte in the storage space prevents contact between the electrodes.- -

- -40. (Amended) The microscopic rechargeable battery according to claim 33 wherein the storage space comprises a porous separator carrying reaction accommodating electrolyte.- -

A marked up copy of the foregoing is presented below:

- -40. (Amended) [A] <u>The</u> microscopic rechargeable battery according to claim 33 wherein the storage space comprises a porous separator carrying <u>reaction accommodating</u> electrolyte.- -

- -41. (Amended) A method comprising the acts of:

fabricating a microscopic electrical energy storage battery comprised of reactant electrodes by which an electrical charge is chemically transferred and having a microscopic footprint substantially less than 20 cm^2 which is size-congruent and electronically compatible with a microelectromechanical system ;

integrating the microscopic battery into the microelectromechanical system as an integrated internal source of electrical power. - -

A marked up copy of the foregoing is presented below:

- -41. (Amended) A method comprising the [steps] acts of:

fabricating a microscopic electrical energy storage battery comprised of reactant electrodes by which an electrical charge is chemically transferred and having a microscopic footprint substantially less than 20 cm^2 which is size-congruent and electronically compatible with a microelectromechanical system ;

integrating the microscopic battery into [a] the microelectromechanical system [MEMS] as an integrated internal source of electrical power. - -

- -42. (Amended) A method comprising the acts of:

fabricating a microscopic electrical energy storage battery comprised of chemical reactant electrodes and having a microscopic footprint substantially less than 20 cm^2 which is size-congruent, material-compatible and electronically suitable to be integrated into microcircuitry;

integrating the microscopic battery with the microcircuitry as a long term internally-derived source of electrical power. - -

A marked up copy of the foregoing is presented below:

- -42. (Amended) A method comprising the [steps] acts of:

fabricating a microscopic electrical energy storage battery comprised of chemical reactant electrodes and having a microscopic footprint substantially less than 20 cm^2 which is size-congruent, material-compatible and electronically suitable to be integrated into microcircuitry;

integrating the microscopic battery with [MEMS] [a microelectromechanical system or other] the microcircuitry as a [low power loss] long term internally-derived source of electrical power. - -

- -43. (Amended) A method comprising the acts of:

fabricating a microscopic electrical energy storage battery comprising a microscopic footprint substantially less than 20 cm^2 which is size-congruent material-compatible and electronically-suitable to be integrated as a power source into a microscopic circuit;

integrating the microscopic battery into the microscopic circuit as a fully integrated internally derived source of electrical power. - -

A marked up copy of the foregoing is presented below:

- -43. (Amended) A method comprising the [steps] acts of:

fabricating a microscopic electrical energy storage battery comprising a microscopic footprint substantially less than 20 cm^2 which is size-congruent material-compatible and electronically-suitable to be integrated as a power source into a microscopic circuit;

integrating the microscopic battery into [a] the microscopic circuit as a fully integrated [low power loss] internally derived source of electrical power. - -

- -51. (Amended) A method of making a microscopic battery for internal storage of electricity comprising the acts of:

forming spaced thin film microscopic electrode layers of reactant materials upon non-conducting material, each layer having a microscopic volume comprising a footprint substantially less than 20 cm^2;

etching away sacrificial portions of at least one thin film microscopic electrode layer of reactant material;

interposing reaction-accommodating electrolyte between the remaining microscopic electrode layers of reactant material within a housing so that the electrode layers serve as internal only sources of reactants. - -

A marked up copy of the foregoing is presented below:

- -51. (Amended) A method of making a microscopic battery for internal storage of electricity comprising the [steps] acts of:

forming spaced thin film microscopic electrode layers of reactant materials upon non-conducting material, each layer having a microscopic volume comprising a footprint substantially less than 20 cm^2;

etching away [undesired] sacrificial portions of at least one thin film microscopic electrode layer of reactant material;

interposing reaction-accommodating electrolyte between the remaining microscopic electrode layers of reactant material within a housing so that the electrode layers serve as internal only sources of reactants. - -

- - 52. (Amended) The method according to claim 51 further comprising the act of interposing a microscopic separator in communication with the electrolyte between the microscopic electrode layers. - -

A marked up copy of the foregoing is presented below:

- - 52. (Amended) [A] The method according to claim 51 further comprising the act of interposing a microscopic separator in communication with the electrolyte between the microscopic electrode layers. - -

- -53. (Amended) The method according to claim 52 wherein the microscopic separator is etched to provide a cavity for the electrolyte.- -

A marked up copy of the foregoing is presented below:

- -53. (Amended) [A] The method according to claim 52 wherein the microscopic separator is etched to provide a cavity for the electrolyte.- -

- -54. (Twice Amended) The method according to claim 51 further comprising the act of interposing a non-conductive microscopic polymeric separator in communication with the electrolyte between the microscopic electrode layers. - -

A marked up copy of the foregoing is presented below:

- -54. (Amended) [A] The method according to claim 51 further comprising the [step] act of interposing a non-conductive microscopic polymeric separator in communication with the electrolyte between the microscopic electrode layers. - -

--89. (Amended) A conformable microscopic battery comprising a microscopic volume and an internal only source of electricity having a first microscopic electrode of reactant material in the form of a microscopic wire, reaction-accommodating electrolyte concentrically disposed around the microscopic wire and a second hollow tubular microscopic electrode of reactant material concentrically surrounding the electrolyte, the surface area of which is microscopic and substantially less than 20 cm^2. - -

A marked up copy of the foregoing is presented below:

--89. (Amended) A conformable microscopic battery comprising a microscopic volume and an internal only source of electricity having a first microscopic electrode of reactant material in the form of a microscopic wire, reaction-accommodating electrolyte concentrically disposed around the microscopic wire and a second hollow tubular microscopic electrode of reactant material concentrically surrounding the electrolyte, the surface area of which is microscopic and substantially less than 20 cm^2. - -

- -90. (Amended) The conformable microscopic battery according to claim 89 wherein the electrolyte is aqueous.- -

A marked up copy of the foregoing is presented below:

- -90. (Amended) [A] The conformable microscopic battery according to claim 89 wherein the electrolyte is aqueous.- -

- -91. (Amended) The conformable microscopic battery according to claim 90 wherein the aqueous electrolyte is disposed in a porous material.- -

A marked up copy of the foregoing is presented below:

- -91. (Amended) [A] The conformable microscopic battery according to claim 90 wherein the aqueous electrolyte is disposed in a porous material.- -

- -92. (Amended) The conformable microscopic battery according to claim 89 wherein the electrolyte is solid.- -

A marked up copy of the foregoing is presented below:

- -92. (Amended) [A] The conformable microscopic battery according to claim 89 wherein the electrolyte is solid.- -

- -94. (Amended) A rechargeable microscopic battery comprising an internally operated source of electricity comprising internal only reactants in the nature of first and second spaced microscopic electrodes, each being microscopic in volume and comprising a microscopic footprint substantially less than 20 cm^2 and a microscopic amount of aqueous reaction-accommodating electrolyte disposed in a microscopic cavity between the reactant microscopic electrodes. - -

A marked up copy of the foregoing is presented below:

- -94. (Amended) A rechargeable [small area] microscopic battery comprising an internally operated source of electricity comprising internal only reactants in the nature of first and second [thin] spaced microscopic electrodes, each being microscopic in volume and comprising a microscopic footprint substantially less than 20 cm^2 and a microscopic amount of aqueous reaction-accommodating electrolyte disposed in a microscopic cavity between the [thin] reactant microscopic electrodes. - -

- -95. (Amended) A method of making a microscopic battery comprising an internally operated source of electricity comprising internal only reactants, the method comprising the seriatim acts of depositing as thin film a microscopic internal reactant in the nature of a first electrode, a spacer and a microscopic internal reactant in the nature of a second electrode comprising a footprint substantially smaller than 20 cm^2, etching a part of the spacer to create a microscopic cavity which accesses to both electrodes and filling the microscopic cavity with aqueous reaction-accommodating electrolyte through a passageway in one of the thin films. - -

A marked up copy of the foregoing is presented below:

- -95. (Amended) A method of making a microscopic battery comprising an internally operated source of electricity [compressing] comprising internal only reactants, the method comprising the seriatim acts of depositing [a] as thin film[s] a microscopic internal reactant in the nature of a first electrode, a spacer and a microscopic internal reactant in the nature of a second electrode comprising a footprint substantially smaller than 20 cm^2, etching a part of the spacer to create a microscopic cavity which accesses to both electrodes and filling the microscopic cavity with aqueous reaction-accommodating electrolyte through a passageway in one of the thin films. - -

- -96. (Amended) The method according to claim 95 wherein the filling act is through a passageway in one of the microscopic electrodes. - -

A marked up copy of the foregoing is presented below:

- -96. (Amended) [A] The method according to claim 95 wherein the filling [step] act is through a passageway in one of the microscopic electrodes. - -

- -97. (Amended) The method according to claim 95 further comprising the act of closing the passageway after the filling step. - -

A marked up copy of the foregoing is presented below:

- -97. (Amended) [A] The method according to claim 95 further comprising the [step] act of closing the passageway after the filling step. - -

Please add the following new claims:

- - 103. The microscopic battery according to Claim 10 wherein the second electrode is comprised of a chemical reactant material. - -

- - 104. The microscopic battery according to Claim 16 wherein the separator comprises solid material. - -

- - 105. The microscopic battery according to Claim 16 wherein the separator is comprised of polymeric material. - -

- - 106. The microscopic battery according to Claim 16 wherein the separator is comprised of a dielectric material. - -

- - 107. The microscopic battery according to Claim 16 wherein the separator comprises both solid and liquid materials.- -

- - 108. The microscopic battery according to Claim 42 wherein the microcircuitry is selected from the group consisting of a microelectromechanical system and a non-microelectromechanical microcircuit. - -

- - 109. A microscopic battery comprising at least one cell comprising spaced microscopic reactant electrodes and a microscopic amount of reaction-accommodating electrolyte disposed between the reactant electrodes, the battery providing specific power within the range of $10^{-0.4}$ to $10^{1.6}$ KW/kg and specific energy within the range of $10^{1.1}$ to $10^{2.1}$ kJ/kg. - -

REMARKS

Claims 10 through 43, 51 through 54, 89 through 92, 94 through 97 and 103 through 109 are pending inthis application.

Applicant pursuant to 37 CFR 1.60 by their attorney certify that this continuation application as filed is a true copy of the original parent application. All declarations filed in the parent case are enclosed.

It is respectfully submitted that all of the pending Claims are in condition for allowance.

Respectfully submitted,

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